

## Guidance in load cell selection for weighing systems

Penko Engineering of Veenendaal, the Netherlands, has created two new applications to help designers make the optimum choice of load cell and to set up the Penko SGM 455 digitizer. The Weighing Accuracy Tool is a stand-alone PC application for calculating the required capacity for each load cell in an array, depending on the gross weight of the weigher (including the sample to be weighed), the individual load cell capacity estimated and the utilisation factor. The SGM 455 Configuration and Administration application is provided with a comprehensive help file to take a designer through all stages of setting up the digitizer. Both applications are free to download at [www.penko.com/products\\_software/software\\_home.html](http://www.penko.com/products_software/software_home.html).

The screenshot shows the 'Weight accuracy calculator' application window. It features a menu bar with 'File' and 'Help'. The main interface is divided into several sections:

- Weigher properties:** Includes input fields for 'Dead load' (100.0 kg), 'Tare weight' (190.0 kg), 'Net weight' (55.0 kg), and 'Gross weight' (345.0 kg).
- Load Cells:** Includes input fields for 'Qty' (6 pcs), 'Capacity' (75 kg), 'Total capacity' (450 kg), 'Over capacity' (105 kg), 'Utilization' (50%), and 'Weight range' (225 kg).
- Weight accuracy:** Includes input fields for 'Excitation' (10 Volt), 'Millivolt output' (2 mV/V), 'Indicator resolution' (1.0  $\mu$ V => Display part), and 'Divisions' (10000).
- Results:** Displays 'Calculated accuracy' (0.0245 kg) and 'Round accuracy' (0.0500 kg).

At the bottom, there is a 'Calculate capacity' button and a status bar with the text 'Enter excitation level loadcells (Volt)'.

The Penko Weighing Accuracy Tool screen